

REMARKS

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Office Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-12 are now pending in this application, with Claims 1, and 9-12 being independent. Claim 10 has been amended and Claims 11 and 12 have been added herein.

Claims 1-3, 6, 9, and 10 were rejected under 35 U.S.C. § 103 as being unpatentable over the image sensor depicted in Applicants' Figure 6. Claims 4, 7 and 8 were rejected under § 103 in further view of U.S. Patent No. 4,500,927 (Ozawa). Claim 5 was rejected under § 103 in further view of U.S. Patent No. 4,768,098 (Vogelsong). This rejection is respectfully traversed.

The Office Action recognizes that the sequence of the output lines as recited in the pending claims differs from that depicted in the sensor of Applicants' Figure 6. Nevertheless, the Office Action takes the position that the image sensor in Figure 6 "performs equally well since the noise is being removed from the optical signal. Therefore, it would have been obvious to one of ordinary skill in the art ... to modify the invention in [the sensor of Figure 6] by arranging the common lines with the sequence" recited in the claims. The Office Action suggests that such a modification would be a matter of design choice. Applicants respectfully disagree.

As described in paragraph [0009] of Applicants' specification, if common output lines are arranged in a sequence of a first optical-signal common output line, a first noise-signal common outline, a second optical-signal common output line, and a second noise-signal

common output line, cross-talk generated between the S-N read-out circuits through coupling capacitance between the first noise-signal common outline and the second optical-signal common output line works in opposite directions. As a result, the gain difference, the offset difference and the like are induced between the S-N read-out circuits. On the other hand, by arranging the output lines in the manner recited in Applicants' claims, the noted offset can be minimized because only cross-talk of the reset level is induced as described in paragraph [0049] of Applicants' specification. Therefore, the sequence of the common output lines in the image sensor of Figure 6 has the above-noted problems and one of ordinary skill in the art would not be of the position that such would perform "equally well" as that of the present invention. Thus, one of ordinary skill in the art would not consider changing the sequence of the common output lines of the sensor of Figure 6 to be the same as the sequence of the present invention as a matter of design choice.

Thus, the sensor of Figure 6 fails to disclose or suggest at least a sequence of the first optical-signal common output line, the first noise-signal common output line, the second noise-signal common output line, and the second optical-signal common output line, as is recited in independent Claims 1 and 11. Nor does the depicted sensor of Figure 6 disclose or suggest at least a sequence of the first-signal common output line, the first second-signal common output line, the second second-signal common output line, and the second first-signal common output line, with the first first-signal common output line and the first second-signal common output line being connected to the first differential output means, and the second first-signal common output line and the second second-signal common output line being connected to the second

differential output means, as is recited in independent Claims 9 and 10. Moreover, the sensor of Figure 6 fails to disclose or suggest at least a sequence of a first signal line, second signal line, third signal line, and fourth signal line, with the first signal line outputting a first signal deriving from a first signal source, the second signal line outputting a second signal deriving from the first signal source, the third signal line outputting a second signal deriving from a second signal source and the fourth signal line outputting a first signal deriving from the second signal source, as is recited in the independent Claim 12.

Thus, the sensor of Figure 6 fails to disclose or suggest important features of the present invention recited in the independent claims.

Ozawa and Vogelsong have been reviewed, but are not believed to remedy the deficiencies of the sensor of Figure 6 discussed above.

Thus, Claims 1 and 9-12 are patentable over the citations of record. Reconsideration and withdrawal of the § 103 rejections are respectfully requested.

For the foregoing reasons, Applicant respectfully submits that the present invention is patentably defined by independent Claims 1 and 9-12. Dependent Claims 2-8 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

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